AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1.-11. (Canceled)

12. (Original) A microstrip-waveguide transition comprising:

a waveguide having an open end;

a dielectric substrate having a first side surface attached to the open end;

two separated conductive plates on the first side surface; and

a microstrip probe on a second side surface of the dielectric substrate.

13. (Original) The microstrip-waveguide transition according to claim 12, wherein corners of the waveguide and the dielectric substrate are in alignment.

14. (Original) The microstrip-waveguide transition according to claim 12, comprising:

a backshort cap attached to the second side surface of the dielectric substrate; and

wherein the backshort cap has a central portion at a height in relation to the microstrip probe that is less than 1/2 of a wavelength for a frequency at which the transition operates.

15. (Original) The microstrip-waveguide transition according to claim 13, wherein the backshort cap is attached to the open end with a conductive adhesive to form a hermetic seal.

16. (Original) The microstrip-waveguide transition according to claim 13, wherein the first side of the dielectric sheet is attached to the open end with a conductive adhesive.

17. (Original) A microstrip-waveguide transition comprising:

a waveguide having an open end;

a dielectric substrate having a first side surface attached to the open end;

a microstrip probe on a second side surface of the dielectric substrate; and

a backshort cap attached to the second side surface, wherein the backshort cap has a central portion at a height in relation to the microstrip probe that is less than 1/2 of a wavelength for a frequency at which the transition operates.

18. (Original) The microstrip-waveguide transition according to claim 17, comprising:

two separated conductive plates on the first side surface.

19. (Original) The microstrip-waveguide transition according to claim 17, wherein the backshort cap is attached to the second side surface with an adhesive to form a hermetic seal between the backshort cap and the dielectric substrate.

20. (Original) A microstrip-waveguide transition comprising:

a waveguide having an open end;

a dielectric substrate having a first side surface attached to the open end;

a microstrip probe on a second side surface of the dielectric substrate; and

a backshort cap attached to the second side surface, wherein corners of the waveguide and backshort cap are in alignment and the dielectric sheet is arranged between the waveguide and backshort cap.

21. (Previously Presented) The microstrip-waveguide transition according to claim 20, comprising:

a means for tuning out capacitive susceptance between the open end and the microstrip probe with inductive susceptance.

22. (Previously Presented) A microstrip-waveguide transition comprising:

a waveguide having an open end;

a dielectric substrate having a first side surface attached to the open end;

a microstrip probe on a second side surface of the dielectric substrate; and

a backshort cap attached to the second side surface, wherein corners of the waveguide and backshort cap are in alignment and the dielectric sheet is arranged between the waveguide and backshort cap, and wherein two separated conductive plates are on the first side surface.

23. (Previously Presented) A microstrip-waveguide transition comprising:

a waveguide having an open end;

a dielectric substrate being attached to the open end;

a conductive plate being disposed on the dielectric substrate;

a microstrip probe being disposed on a surface of the dielectric substrate in relation to the conductive plate; and

a backshort cap of a height in relation to the microstrip probe.